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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,020	02/07/2001	Masayuki Ariyoshi	34645-00493USPT	5634

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ERICSSON INC.
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EXAMINER

GHULAMALI, QUTBUDDIN

ART UNIT	PAPER NUMBER
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2637

DATE MAILED: 08/19/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/779,020

Applicant(s)

ARIYOSHI ET AL.

Examiner

Qutub Ghulamali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4,5,6</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figures, drawings 1-3, should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 1 is objected to because of the following informalities: Claim 1, lines 9-10, recites "said respective data streams", whereas it should recite "said respective signal data streams" as stated in claim 1, line 4. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

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by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Saito et al ("Saito") (US 2001/0038664A1).

Consider claims 1, 10, 18, 24, Saito discloses (figs. 2, 3, 9) a CDMA based communications system and method comprising receiving signals from a plurality of terminal users (at least two) wherein strong communication signal from a user overlaps channel from other users, the reception portion has an interference canceller device 23 (means for processing), perform interference cancellation on signals, a slot (window, sector) signal configuration circuit 103 for dividing at certain time intervals a reception signal for which path detection has been performed to convert the signal into signals having a slot (window) configuration, minimizing interference of the station with another station (multiuser) (col. 1, paragraphs 0008, 0011; col. 2, paragraphs 0014, 0015, 0016; col. 3, section 0033).

Regarding claims 2-5, 11, 12, 13, 15, 19, 20, 22, 26, 27, 24, Saito discloses (figs, 7, 8) a correlation circuit which comprises a shift register, despread code setting elements and a matched filter having an addition circuit in correlation detection for outputting a

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correlation value signal by sequentially **shifting** the reception signals inputted to the shift register to the subsequent stages (col.7, section 5), perform interference cancellation on signals, a slot (window) signal configuration circuit 103 for dividing (modifying means) at certain time intervals (fraction of signal) a reception signal for which path detection has been performed to convert the signal into signals having a slot (window) configuration, minimizing interference of the station with another station, a **memory storage device** wherein the interference cancellation are stored (col. 7, section 5; col. 1, sections 0008, 0011; col. 2, sections 0014, 0015, 0016).

Regarding claims 6 and 14, Saito discloses the interference canceller device 23 performs on a portion of the signal the same process repeatedly to achieve a multi-stage type interference canceling function to suppress (minimize) interference components (see col. 4, section 0044).

Regarding claim 7, Saito discloses signals configured into slots equal to the divided signals and located repeatedly (col. 4, section 0042).

Regarding claims 8, 16, 28 Saito discloses signal obtained through the stage processing comprise of symbols (col. 6, section 0064).

Regarding claims 9,17, 23 and 29, Saito discloses allowing only a first slot to pass through (selects valid signals) and disallowing the rest of the slots to pass through before being inputted to the correlation circuit and inputting into the correlation circuit the signals whose second slot and subsequent slots are subjected to an interference cancellation process and feedback (col. 2, sections 0014, 0015).

Regarding claims 21, 25, Saito discloses the base transceiver station, wherein replica signals and the reception signals are repeatedly fed back to the correlation circuit thereby to eliminate an interference component (col. 1, section 0013).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Madkour et al (US Patent 6,574,270), Sawahashi et al (US Patent 6,137,788), Thomas et al (US Patent 6,711,219) are cited as arts of interest showing interference minimization in multipath received signals.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (703) 305-7868. The examiner can normally be reached on Monday-Friday from 8:00AM - 5:00PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 703 308-7728. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QG.

August 16, 2004.


TEMESGHEM GHEBRETINSAE
PRIMARY EXAMINER